Canteen Ordering & Billing System

# 1. Content (Introduction)

- Web-based system for ordering food in college canteen  
- Users can select menu items using checkboxes  
- Total bill is auto-calculated  
- Order sent to kitchen staff with token or order ID  
- Admin/staff can manage menu and order queue  
- Developed using the Prototype Model for UI-first, feedback-based development  
- Works on both mobile and laptop

# 2. Information

- Target Users: Students, Staff, Admin  
- Key Modules:  
 • Menu Display & Selection  
 • Order Billing & Token Generation  
 • Kitchen Order Queue  
 • Admin Menu Control  
- Technology Stack:  
 • Frontend: HTML, CSS, JS, Bootstrap  
 • Backend: PHP (or Flask)  
 • Database: MySQL  
 • Local Server: XAMPP or WAMP  
- Interface: Fully responsive for mobile and desktop

# 3. Objectives

- Simplify and digitize food ordering process in college canteen  
- Enable mobile or laptop-based ordering with real-time billing  
- Eliminate long queues and manual billing errors  
- Provide centralized order view for kitchen staff  
- Allow admin to manage menu and prices dynamically  
- Offer a system that is easy to use, fast, and intuitive  
- Focus on UI feedback using the Prototype Model before full development  
- Lay foundation for future upgrades like login, QR scanning, or payments- Demonstrate application of proper Software Engineering practices and documentation.

# 4. Function

User Functions:  
- View menu with food items and prices  
- Select multiple items via checkboxes  
- See live total bill  
- Confirm order and receive token/order ID  
  
Staff Functions:  
- View incoming orders in real-time  
- Mark orders as “Being Prepared” or “Ready”  
  
Admin Functions:  
- Add/edit/remove menu items  
- Set or update item prices  
- View simple sales report by day

# 5. Performance

- System processes orders in less than 3 seconds  
- Optimized for both mobile and desktop  
- Handles multiple users ordering at once (ideal for lunch hours)  
- Displays real-time order updates  
- Lightweight and fast-loading interface  
- Smooth UX with Bootstrap-based design

# 6. Problem Decomposition

1. UI Module

* Interactive Menu Display: Shows food/drink items with checkboxes for easy selection.
* Responsive Design: Adapts to different screen sizes (mobile, tablet, desktop).

2. Order Module

* Selection Management: Tracks chosen items, quantities, and modifications.
* Real-time Calculation: Automatically updates the order total with taxes (if applicable).

3. Billing Module

* Bill Generation: Creates a detailed summary of ordered items and final amount.
* Digital Receipt: Provides an email/printable receipt for customer records.

4. Kitchen Queue

* Order Alerts: Instantly notifies kitchen staff of new orders.
* Status Tracking: Displays order progress (pending, cooking, ready).

5. Admin Module

* Menu Control: Add/edit/remove items and adjust prices dynamically.
* Basic Analytics: Views sales reports and popular items for decision-making.